

## WDFW Steelhead RMP Work Session Questions

- 1) What would an integrated hatchery program look like? Describe these components:
  - Broodstock
  - Rearing program
  - Fish on the spawning grounds
  - Purpose (harvest vs conservation)
- 2) What would wild fish management zones look like?
- 3) Identify two data needs or gaps that must be addressed in the RMP through research and monitoring.
- 4) List two changes you would like to see occur within WDFW's current management of steelhead.
- 5) List two things you support within WDFW's current management of steelhead.

09/19/2006

## **WDFW STEELHEAD RMP WORK SESSION QUESTIONS**

### **Group one**

#### **1. What would an integrated hatchery program look like? Describe these components:**

- **Broodstock**
- **Rearing program**
- **Fish on the spawning grounds**
- **Purpose (harvest vs. conservation)**

##### *Broodstock*

- *Collected over entire run timing*
- *100% NORs' to begin with then PNI to equal or greater than 0.70*

##### *Rearing program*

- *1 – year smolts with volitional release*
- *2 – year smolts for fish not smolting in 1<sup>st</sup> year*

##### *Fish on spawning grounds*

- *HORs' probably between 0.2 and 0.3*

##### *Purpose*

- *Conservation*

#### **2. What would wild fish management zones look like?**

##### *Ideally:*

- *No hatchery fish plants/ try to remove strays*
- *Must have intact habitat, hydrology and nutrient load*
- *Manage for gene banking*
- *3 possible options for fishing opportunity depending on escapement levels: kill fishery, catch and release fishery, no fishing*

#### **3. Identify two data needs or gaps that must be addressed in the RMP through research and monitoring.**

- *How to identify and enumerate hatchery and wild fish on spawning grounds*
- *Need genetic samples to identify impact of hatchery plants on wild fish*

**4. List two changes you would like to see occur within WDFW's current management of steelhead.**

- *Wild fish managements in a major watershed*
- *Push for selective harvest by co-managers*

**5. List two things you support within WDFW's current management of steelhead.**

- *Marking of all hatchery fish*
- *Segregated populations in some watersheds to allow harvest of hatchery fish while maintaining healthy wild runs*

## **WDFW STEELHEAD RMP WORK SESSION QUESTIONS**

### **Group two**

#### **1. What would an integrated hatchery program look like? Describe these components:**

- **Broodstock**
- **Rearing program**
- **Fish on the spawning grounds**
- **Purpose (harvest vs. conservation)**

##### *Broodstock*

- *Local genes, over spawn time*

##### *Rearing program*

- *Survival (goal)/rearing in local watershed*

##### *Fish on the Spawning grounds*

- *pHOS, less than 50% or more + 50% pNOB >100% 1:1 ratio*

##### *Purpose (harvest vs. conservation)*

- *Both, harvest potentially replace non-local*
- *Conservation: 100% ESA objectives*

#### **2. What would wild fish management zones look like?**

- *Legacy population/ segregation of wild and hatchery*
- *Free of hatchery fish*

#### **3. Identify two data needs or gaps that must be addressed in the RMP through research and monitoring.**

- *spawning survey, composition of wild and hatchery*
- *Smolt mon/prod*
- *Genetic*

#### **4. List two changes you would like to see occur within WDFW's current management of steelhead.**

- *Co-manager resource balance*
- *Increase opportunity for wild fish*

**5. List two things you support within WDFW's current management of steelhead.**

- *Progress after threat of ESA*
- *Hatchery production for steelhead harvest*

## **WDFW STEELHEAD RMP WORK SESSION QUESTIONS**

### **Group three**

**1. What would an integrated hatchery program look like? Describe these components:**

- **Broodstock**
- **Rearing program**
- **Fish on the spawning grounds**
- **Purpose (harvest vs. conservation)**

#### *Broodstock*

- *Derived from local Population*
- *Incorporated at x % annually*

#### *Rearing program*

- *Rearing to minimize domest.*
- *Various juvenile release phases (1 or 2)*
- *<pNOB*
- *Either-or*

**2. What would wild fish management zones look like?**

- *no segregated programs*
- *Possible Int/Rec*
- *Selective fisheries (Wild retention determined by abundance)*

**3. Identify two data needs or gaps that must be addressed in the RMP through research and monitoring.**

- *pHOS*
- *Spatial and temporal overlap*
- *Natural juvenile productivity*

**4. List two changes you would like to see occur within WDFW's current management of steelhead.**

- *Re-think haul and dump programs*
- *All selective fisheries*
- *Establish more constrained brood-takes*

**5. List two things you support within WDFW's current management of steelhead.**

- *Development of segregated stocks (when used properly)*
- *Development of spawner escapement levels*

## WDFW STEELHEAD RMP WORK SESSION QUESTIONS

### Group four

#### **1. What would an integrated hatchery program look like? Describe these components:**

- **Broodstock**
- **Rearing program**
- **Fish on the spawning grounds**
- **Purpose (harvest vs. conservation)**

##### *Broodstock*

- *Aim for PNI > .70*
- *Collection representing timing and geographical distribution, size and age of natural population*
- *Largest effective population possible*

##### *Spawning*

- *Single family parenting*
- *No purposeful selection of traits (timing, size, age)*

##### *Rearing*

- *Should mimic wild fish (majority two year smolts) optimally*
- *Growth modulation (fast in spring etc) preferred*
- *Volitional release (marking 100%)*

##### *Fish on spawning grounds*

- *PNI > .70*

#### **2. What would wild fish management zones look like?**

- *No segregated hatchery program*
- *Allow integrated hatchery recovery program*
- *Wild fish management zones with no hatchery programs do not allow harvest (hooking mortality or netting)*

#### **3. Identify two data needs or gaps that must be addressed in the RMP through research and monitoring.**

- *Smolt count monitoring (total smolt abundance and mortality in near shore marine environment)*
- *Spawning ground composition HOR vs. NOR*



**4. List two changes you would like to see occur within WDFW's current management of steelhead.**

- *More effective hatchery practices to obtain results achieved in the 70's and 80's consistent with AHA*
- *Move away from single stock management approach*

**5. List two things you support within WDFW's current management of steelhead.**

- *Recognize the need for change and steelhead management plan in work.*